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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/501,113
Filing Date: July 12, 2004
Appellant(s): SWATTON, STEWART NATHAN RIDGLEY

A. Blair Hughes
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 07/17/2008 appealing from the Office action mailed 10/15/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,822,445	Wong	10/13/1998
6,444,969 B2	Johnson	09/03/2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 3, 6, and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong U.S. Patent No. 5,822,445 in view of Johnson U.S. Patent No. 6,444,969.

- With regards to claims 1 and 6, Wong teaches a direct optical biometric sensor comprising detecting means for detecting radiation ("**It will be appreciated that conventional imaging hardware (not shown) could be located in the optical path. For example... means for converting images to electrical signals e.g. a Videocon CCD or a CMOS device**")

[Wong, Column 3 Lines 45 – 49]) and radiation directing means for directing radiation from a point of contact of an individual with the radiation directing means towards the detecting means in response to contact of the individual with the radiation directing means at the point of contact **(“Where the ridges of the finger touch the face to form an interface, the illuminating light is diffusely reflected and will exit the prism through the viewing face along optical path to the eye E of an operator.” [Wong, Column 3 Lines 33 – 49])**, wherein the radiation directing means comprises a planar slab waveguide having a core layer with a region which is at least partly exposed and means for introducing radiation into the core layer such that radiation propagates throughout the exposed region thereof **(“light is directed into the prism, and as well is directed into the free space region beyond the plane of the fingerprint receiving face.” “In operation, diffused light is directed into the prism 10 through both of the opposed parallel faces 18 and 20, and against the fingerprint receiving face 12 to substantially uniformly illuminate a finger placed thereon.” [Wong, Column 3 Lines 18 – 40])**. Wong, however, fails to teach the sensor further comprising an interference filter disposed between the planar slab waveguide and the detecting means. Johnson teaches placement of an interference filter between the waveguide and the detecting means. **(“The photoelectric sensor may have a filter 20 or may be tuned to detect only the**

frequency of radiation emitted by the LED array so as to prevent *interference* from radiation from other sources.” Furthermore, Fig. 1 shows element 20, the filter for preventing *interference* disposed between the waveguide and sensor, detecting means. [Johnson, Fig. 1 Element 20, Column 4 Lines 24 – 30]) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Wong to include the teachings of Johnson. This modification would have been prompted to detect only the emitted frequency of radiation dispersed by the LEDs. The placement of this filter would help prevent artifacts that could be introduced from erroneous radiation.

- With regards to claim 3, Wong in view of Johnson teach a sensor according to claim 1. Wong teaches wherein the means for introducing radiation into the core layer of the planar slab waveguide comprises one or more diodes lasers or light-emitting diodes. (**“the multi-LED array 26a and 26b extends above 26b and below 26a the plane of the fingerprint receiving surface 12, such that some of the light is directed directly against the side of a finger 14 contacting the fingerprint receiving surface 12, the remainder being transmitted into the prism through the face 18.” [Wong, Column 3 Lines 1 – 8])**

- With regards to claim 8, Wong teaches an optical biometric sensor comprising: a radiation detector; (**"It will be appreciated that conventional imaging hardware (not shown) could be located in the optical path. For example... means for converting images to electrical signals e.g. a Videocon CCD or a CMOS device"** [Wong, **Column 3 Lines 35 – 49**]) a radiation director capable of directing radiation from a point of contact of an individual with the radiation director towards the radiation detector in response to contact of the individual with the radiation director at the point of contact (**[Wong Column 3, Lines 33 – 49]**), the radiation director further comprising a planar slab waveguide having a core layer with a region which is at least partly exposed and a radiation source for introducing radiation into the core layer such that radiation propagates throughout the exposed region thereof. (**"Where the ridges of the finger touch the face to form an interface, the illuminating light is diffusely reflected and will exit the prism through the viewing face along optical path to the eye E of an operator."** [Wong, **Column 3 Lines 18 – 40**]) However Wong fails to teach wherein the sensor further comprises an interference filter disposed between the planar slab waveguide and the radiation detector. Johnson teaches the sensor further comprising an interference filter disposed between the planar slab waveguide and the radiation detector. (**"The photoelectric sensor may have a filter 20 or may be tuned to detect only the**

frequency of radiation emitted by the LED array so as to prevent *interference* from radiation from other sources.” Furthermore, Fig. 1 shows element 20, the filter for preventing *interference* disposed between the waveguide and sensor, detecting means. [Johnson, Fig. 1 Element 20, Column 4 Lines 24 – 30]) It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the invention of Wong to include the teachings of Johnson. This modification would have been prompted to detect only the emitted frequency of radiation dispersed by the LEDs. The placement of this filter would help prevent artifacts that could be introduced from erroneous radiation.

- With regards to claim 9, Wong in view of Johnson teach the optical biometric sensor of claim 8. Wong teaches wherein the radiation source is selected from one or more diode lasers or one or more light emitting diodes. (“**the multi-LED array 26a and 26b extends above 26b and below 26a the plane of the fingerprint receiving surface 12, such that some of the light is directed directly against the side of a finger 14 contacting the fingerprint receiving surface 12, the remainder being transmitted into the prism through the face 18.**” [Wong, Column 3 Lines 1 – 8])

(10) Response to Argument

On page 7 section C first paragraph of the brief filed 07/17/2008, the appellant states "the Examiner has not established a *prima facie* case of obviousness." The Examiner respectfully disagrees and notes that the Examiner did determine the scope and contents of the prior art applied, stated the differences between the prior art of record and the claims, resolved the level of ordinary skill in the pertinent art, and relied upon objective evidence found in the application indicating obviousness.

On page 8 first paragraph of the brief filed 07/17/2008, the appellant goes on to state that "A *prima facie* case of obviousness has not been established in this application at least because Johnson does not disclose or suggest the claimed 'interference filter'." The Examiner disagrees and asserts that Johnson does teach an interference filter in Column 4 Lines 24 – 30. Johnson states that the sensor may have a filter... so as to prevent *interference* from radiation from other sources.

On page 8 paragraph 3 of the brief filed 07/17/2008, the appellant alleges that "the Examiner's rejection is somehow based upon linking the filter 20 element with the term 'interference' in Johnson. Merely because the word 'interference' appears in line 26 of col. 4, does not mean that the filter 20 is an interference filter." The Examiner asserts that the filter 20 of Johnson is a filter for *preventing interference* see Johnson column 4 lines 24 - 26. The Examiner

disagrees with the appellant's statement that the Examiner is merely picking and choosing words because the words appear in the same sentence and it is the function of the filter that is relied upon. The argument that the filter of Johnson is not an interference filter merely because Johnson fails to call it an interference filter as claimed by the applicant is illogical considering that both filters, as described, perform the same/similar functions and are intended for the same/similar purposes.

On page 8 paragraph 4 of the brief filed 07/17/2008, the appellant argues that the Examiner failed to consider the prior art references in their entirety and that "the Examiner has rejected the claims based upon picking and choosing from a few select words in Johnson". The Examiner respectfully disagrees. The Examiner asserts that the prior art reference of Johnson was considered in its entirety and is applicable to the claimed subject matter as they are both directed to similar subject matter. The Examiner asserts that no portion of Johnson was taken out of context. Lines 22 - 30 of Column 4 of Johnson encompass more than one sentence and a few words, the Examiner finds it difficult for one to read the cited section of Johnsons and take anything disclosed therein out of context in view of the rejection as applied.

On page 8 paragraph 5 through page 9 paragraph 2 of the brief filed 07/17/2008, the appellant argues that the filter of Johnson is an absorption filter, "An 'interference filter' is not the same as an absorption filter or narrow band-pass filter that protect a detector from interference. The Examiner disagrees.

There are no statements limiting the filter of Johnson to be an absorption filter. The appellant argues that an interference filter is a known component in optics and a skilled person would understand that an interference filter is a multilayered component that rejects light by interference effects. The Examiner would like to direct attention to the pre-appeal brief filed 02/15/2008. On page 4 paragraph 3 of the pre-appeal brief filed 02/15/2008, the appellant discloses the understanding to one of ordinary skill in the pertinent art in regards to the meaning of the term "interference filter". The cited portion of the appellant's pre-appeal brief states that an interference filter may be high-pass, low-pass, bandpass, or band-rejection. The Examiner states that the rationale supported therein contradicts the appellant's statement that "a skilled person would understand that an interference filter is a multilayered component". The Examiner also brings attention to column 6 claims 13 - 15, column 7 claims 29 - 31, and column 8 claims 43 - 45 of Johnson. In the cited portions of Johnson, Johnsons details that the filter means comprises a narrow band-pass filter. The Examiner asserts that one of ordinary skill in the art at the time of the invention would understand that the filter of Johnson could be an interference filter.

On page 9 paragraph 2 of the brief filed 07/17/2008, the appellant argues that "the specification of the instant application teaches that the claimed interference filter has a multi-layered construction and will reject light incident on the filter at a small angle away from normal incidence even if light of the same the same wavelength is passed at normal incidence - this allows closely spaced

features to be resolved. (See specification at page 5, lines 6-9)." Firstly, the Examiner argues that Page 5 Lines 6-9 of the instant application does not disclose a multi-layered construction nor does it discloses rejecting light incident on the filter at a small angle away from normal incidence. Secondly, the Examiner notes that the features upon which applicant relies (i.e., an interference filter that has a multi-layer construction and will reject light incident on the filter at a small angle away from normal incidence even if light of the same wavelength is passed at normal incidence, allowing closely spaced features to be resolved) are, not only not supported by the original specification, but are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Eric Rush

/E.R./

Conferees:

Art Unit: 2624

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